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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/828,546	04/19/2004	Kern W. Wong	P05310C1	3883

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EXAMINER

LAXTON, GARY L

ART UNIT	PAPER NUMBER
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2838

DATE MAILED: 04/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

EX

Office Action Summary	Application No. 10/828,546	Applicant(s) WONG ET AL.	
	Examiner Gary L. Laxton	Art Unit 2838	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 23-45 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 23-45 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>04/19/04</u> | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Specification

1. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 23, 25, 26, 28, 29, 33, 36 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harris (US 6,362,612) in view of Butler (US 6,815,941).

Harris discloses a bandgap reference circuit having a current source (M2); a circuit branch (R2, Q2) with positive and negative temperature coefficients as claimed; further base emitter diode (Q1); adjustment circuit (120).

However, Harris does not disclose a startup circuit.

Butler teaches a bandgap reference circuit including a startup circuit connected to the input of an adjustment circuit (16) for ensuring proper startup of the bandgap reference circuit.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Harris to include a startup circuit to ensure the proper startup of the bandgap reference circuit.

4. Claims 24, 30, 31, 34 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harris (US 6,362,612) and Butler (US 6,815,941) in view of Yu (US 5,867,013).

Harris and Butler disclose the claimed subject matter in regards to claims 23 and 28 supra except for the startup circuit injects a current into the emitter of the further base emitter diode.

Yu teaches a bandgap reference circuit having a startup circuit (44) connected to an input of an adjustment circuit (32) for injecting a starting current in the emitter of a further base emitter diode (40) to ensure a proper startup of the bandgap reference circuit.

5. Claims 27, 32 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harris (US 6,362,612) and Butler (US 6,815,941) in view of King et al (US 5,471,131).

Harris and Butler disclose the claimed subject matter in regards to claims 23 and 28 supra except for a correction circuit for offsetting a voltage drop in the bandgap circuit.

King et al teaches using a correction circuit for correcting a voltage drop in a bandgap circuit.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Harris to include a correction circuit for correcting a voltage

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drop in the bandgap reference circuit in order to produce the proper voltage at the output of the reference circuit as taught by King et al.

6. Claims 38-43 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harris (US 6,362,612) and Butler (US 6,815,941) in view of May (US 6,362,605).

Harris discloses a bandgap reference circuit having a current source (M2); a circuit branch (R2, Q2) with positive and negative temperature coefficients as claimed; further base emitter diode (Q1); adjustment circuit (120).

However, Harris does not disclose a startup circuit and does not disclose a cellular telephone with analog to digital circuitry and regulation circuitry.

Butler teaches a bandgap reference circuit including a startup circuit connected to the input of an adjustment circuit (16) for ensuring proper startup of the bandgap reference circuit.

May teaches an integrated circuit for a cellular telephone comprising regulation circuitry and a bandgap circuit; and furthermore, May discloses analog to digital circuitry for converting analog signals to digital signals to be used by the integrated circuitry.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Harris to include a startup circuit to ensure the proper startup of the bandgap reference circuit; and it would have been obvious to modify Harris to include analog to digital circuitry and regulation circuitry to be used in a cellular telephone in order to converter and regulate analog signals into digital signals to be used by the cellular telephone integrated circuitry for proper operation of the telephone by providing proper regulated current and voltages to the circuitry.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 6,724,176 Wong et al teaches a low power, low noise band-gap circuit using second order curvature correction; US 6,744,304 Egerer et al discloses a circuit for generating a defined temperature dependent voltage.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gary L. Laxton whose telephone number is (571) 272-2079. The examiner can normally be reached on Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Sherry can be reached on (571) 272-2084. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

 3/21/05
Gary L. Laxton
Primary Examiner
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